Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

Listing of Claims:

Claim 1. (**Currently Amended**) A method for **the** diagnosis of ~~Alzheimer's disease~~ **a neurological condition** in a human subject**, wherein said neurological condition is selected from the group consisting of:**
Alzheimer's disease; incipient Alzheimer's disease; possible Alzheimer's disease; and Alzheimer's disease associated with evidence of other type of dementia;
~~which comprises screening for the presence of a cell cycle regulatory defect at the G1/S phase transition in non-neuronal cells of the human subject~~
wherein said method comprises the steps of:
(A) determining the effectiveness of the G1/S cell cycle checkpoint exhibited by a non-neuronal cell of said subject; and
(B) comparing said determined G1/S cell cycle checkpoint effectiveness with the G1/S cell cycle checkpoint effectiveness exhibited by a non-neuronal reference cell of a healthy individual or of an individual having said neurological condition, to thereby diagnose whether said subject has said neurological condition.

Claim 2. (**Currently Amended**) **The method of** ~~A method according to~~ claim 1 wherein **said neurological condition is** ~~a reduction in the effectiveness of the checkpoint control at the G1/S transition is taken as an indication that the subject has~~ Alzheimer's disease.

Claim 3. (**Currently Amended**) ~~A method according to claim 1 or claim 2 wherein screening for the presence of a cell cycle regulatory defect at the G1/S phase transition~~ **The method of any of claims 1-2 wherein said step (A)** is carried out

by: inducing cell division in ~~the~~ **said** non-neuronal ~~cells~~ **cell** and testing ~~the~~ responsiveness of ~~the cell~~ **said non-neuronal cell of said subject** to a cell division **G1** inhibitor substance, wherein ~~a~~ reduced responsiveness to ~~the~~ **said** cell division **G1** inhibitor substance ~~in cells from the subject, as compared to control cells not having a cell cycle regulatory defect at the G1/S phase transition, is taken as in~~ indication of ~~presence of a cell cycle regulatory defect at the G1/S phase transition~~ **by said non-neuronal cell of said subject relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint**.

Claim 4. (**Canceled**)

Claim 5. (**Currently Amended**) ~~A method according to claim 1 or claim 2 wherein screening for the presence of a cell cycle regulatory defect at the G1/S phase transition~~ **The method of any of claims 1-2 wherein said step (A)** is carried out by: inducing cell division in ~~the~~ **said** non-neuronal ~~cells~~ **cell** and testing ~~the~~ responsiveness of ~~the cells~~ **said non-neuronal cell of said subject** to a stimulus that induces **G1** cell cycle arrest, wherein a reduced responsiveness to said stimulus ~~in cells from the subject, as compared to control cells not having a cell cycle regulatory defect at the G1/S phase transition, is taken as an indication of presence of a cell cycle regulatory defect at the G1/S phase transition~~ **by said non-neuronal cell of said subject relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint**.

Claim 6. (**Currently Amended**) ~~A method according to claim 5~~ **The method of claim 5,** wherein the stimulus that induces cell cycle arrest is selected from oxidative stress, **ionizing** ~~ionising~~ radiation, hypoxia, or UV radiation.

Claim 7. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 3 wherein the responsiveness of **said non-neuronal cell of said subject** ~~the cells~~ to ~~the~~ **said** cell division **G1** inhibitor substance ~~or stimulus that induces cell cycle arrest is tested~~ **is determined** by a cell proliferation assay, **wherein** ~~relatively~~ higher proliferative activity in **said non-neuronal cell of said subject** ~~cells from the subject, as compared to control cells not having a cell cycle regulatory defect at the G1/S phase transition,~~ following treatment with **said** ~~the~~ cell division **G1** inhibitor **substance** ~~or stimulus that induces cell cycle arrest being taken as an indication of the presence of a cell cycle regulatory defect at the G1/S phase transition~~ **relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint**.

Claim 8. (**Currently Amended**) ~~A method according to~~ **The method of** claim 3**,** wherein the responsiveness of ~~the cells~~ **said non-neuronal cell of said subject** to ~~the~~ **said** cell division **G1** inhibitor substance ~~or stimulus that induces cell cycle arrest is tested~~ **is determined** by calculating the relative lengthening of the G1 phase of the cell cycle ~~in cells from the subject, a reduced relative lengthening of the G1 phase in the presence of the cell division inhibitor substance in said cells, as compared to control cells not having a cell cycle regulatory defect at the G1/S phase transition, being taken as an indication of a cell cycle regulatory defect at the G1/S phase transition~~ **in said non-neuronal cell of said subject, wherein a reduced relative lengthening of the G1 phase following treatment with said cell division G1 inhibitor substance relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint**.

Claim 9. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 3 wherein the responsiveness of **said non-neuronal cell of said subject** ~~the~~

~~cells~~ to **said** ~~the~~ cell division **G1** inhibitor substance ~~or stimulus that induces cell cycle arrest is tested~~ **is determined** by analysis of expression of a cell cycle regulatory protein or an mRNA encoding a cell cycle regulatory protein.

Claim 10. (**Withdrawn – Currently Amended**) ~~A method as claimed in~~ **The method of** claim 9 wherein the cell cycle regulatory protein is selected from the group consisting of CDKN3, p15ink4B, p16ink4A, p19ink4D, p27kip1, p21cip1, p57kip2 and TP53.

Claim 11. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 5 wherein the stimulus that induces **G1** cell cycle arrest is DNA damage and the responsiveness of **said non-neuronal cell of said subject** ~~the cells~~ to **said** ~~the cell this~~ stimulus is **determined** ~~tested~~ by analysis of expression of a DNA damage-response element.

Claim 12. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 11 wherein the DNA damage-response element is selected from the group consisting of TP53, Gadd34, Gadd45A, Gadd45B, Gadd45G, Gadd153 and PCNA.

Claim 13. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 3 wherein the responsiveness of **said non-neuronal cell of said subject** ~~the cells~~ to ~~the~~ **said** cell division **G1** inhibitor substance ~~or stimulus that induces cell cycle arrest is tested~~ **is determined** by assessment of cell viability or cell death, wherein increased cell survival or a reduced degree of cell death in said **non-neuronal cell of said subject** ~~cells, as compared to control cells not having a cell cycle regulatory defect at the G1/S phase transition,~~ following **treatment with** ~~exposure to~~ ~~the~~ **said** cell division **G1** inhibitor **substance** ~~or other stimulus that induces cell cycle arrest is taken as an indication of the presence of a cell cycle regulatory defect at the G1/S phase transition~~ **relative to that of a non-neuronal**

reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint.

Claim 14. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 3 wherein the responsiveness of **said non-neuronal cell of said subject** ~~the cells~~ to **said** ~~the~~ cell division **G1** inhibitor substance ~~or stimulus which elicits cell cycle arrest is tested~~ **is determined** by analysis of expression of a cell death related protein or an mRNA encoding a cell death related protein.

Claim 15. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 14 wherein the cell death related protein is a member of the bcl-2 family of proteins.

Claim 16. (**Withdrawn – Currently Amended**) ~~A method according to~~ **The method of** claim 3 wherein the responsiveness of **said non-neuronal cell of said subject** ~~the cell~~s to ~~the~~ **said** cell division **G1** inhibitor substance ~~or stimulus which elicits cell cycle arrest is tested~~ **is determined** by assessment of DNA content of **said non-neuronal cell of said subject** ~~the cells~~ with or without cell cycle analysis.

Claim 17. (**Currently Amended**) ~~A method according to claim 1~~ **The method of any of claims 1-2,** wherein ~~the non-neuronal cells are lymphocytes~~ **said non-neuronal cell of said subject is a lymphocyte**.

Claims 18-29. (**Canceled**).

Claim 30. (**New**) The method of claim 1, wherein said neurological condition is incipient Alzheimer's disease.

Claim 31. (**New**) The method of claim 1, wherein said neurological condition is possible Alzheimer's disease.

Claim 32. (**New**) The method of claim 1, wherein said neurological condition is probable Alzheimer's disease.

Claim 33. (**New**) The method of claim 5, wherein the responsiveness of said non-neuronal cell of said subject to said stimulus that induces G1 cell cycle arrest is determined by a cell proliferation assay, wherein higher proliferative activity in said non-neuronal cell of said subject following exposure to said stimulus that induces G1 cell cycle arrest relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint.

Claim 34. (**New**) The method of claim 5, wherein the responsiveness of said non-neuronal cell of said subject to said stimulus that induces G1 cell cycle arrest is determined by calculating the relative lengthening of the G1 phase of the cell cycle in said non-neuronal cell of said subject, wherein a reduced relative lengthening of the G1 phase following exposure to said stimulus that induces G1 cell cycle arrest relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint.

Claim 35. (**New**) The method of claim 5 wherein the responsiveness of said non-neuronal cell of said subject to said stimulus that induces G1 cell cycle arrest is determined by analysis of expression of a cell cycle regulatory protein or an mRNA encoding a cell cycle regulatory protein.

Claim 36. (**New**) The method of claim 35 wherein the cell cycle regulatory protein is selected from the group consisting of CDKN3, p15ink4B, p16ink4A, p19ink4D, p27kip1, p21cip1, p57kip2 and TP53.

Claim 37. (**New**) The method of claim 5 wherein the responsiveness of said non-neuronal cell of said subject to said stimulus that induces G1 cell cycle arrest is determined by assessment of cell viability or cell death, wherein increased cell survival or a

reduced degree of cell death in said non-neuronal cell of said subject following exposure to said stimulus that induces G1 cell cycle arrest relative to that of a non-neuronal reference cell of a healthy individual indicates decreased effectiveness of the G1/S cell cycle checkpoint.

Claim 38. (**New**) The method of claim 5 wherein the responsiveness of said non-neuronal cell of said subject to said stimulus which elicits G1 cell cycle arrest is determined by analysis of expression of a cell death related protein or an mRNA encoding a cell death related protein.

Claim 39. (**New**) The method of claim 38 wherein the cell death related protein is a member of the bcl-2 family of proteins.

Claim 40. (**New**) The method of claim 5 wherein the responsiveness of said non-neuronal cell of said subject to said stimulus which elicits G1 cell cycle arrest is determined by assessment of DNA content of said non-neuronal cell of said subject with or without cell cycle analysis.